

IN THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1 - 52 (canceled).

53. (New) An elongate tubular heat transfer element comprising a wall defining a hollow interior which extends longitudinally of a tube axis, said wall being of monolithic construction and having an inner surface and an outer surface and being formed from a composite material consisting essentially of a matrix of a fluoropolymer selected from polyvinylidene fluoride and copolymers of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride, the matrix having embedded therein rovings of boron-free chemically resistant glass fibres, the rovings comprising from about 20% to about 60% by volume based upon the volume of the composite material and including rovings which extend substantially in the length of the tubular heat transfer element and rovings which extend spirally around the tube axis.

54. (New) An elongate tubular heat transfer element according to claim 53, wherein the fluoropolymer is polyvinylidene fluoride.

55. (New) An elongate tubular heat transfer element according to claim 53, wherein the wall comprises a first layer adjacent the inner surface, a second layer adjacent the outer surface, and at least one other layer intermediate the first and second layers, wherein the rovings in each layer all extend substantially in a common direction which is different from the common direction of any adjacent contiguous layer, and wherein the common direction is in each case selected from a direction extending spirally around the tube

axis and a direction extending substantially in the length of the tubular heat transfer element.

56. (New) An elongate tubular heat transfer element according to claim 53, wherein the rovings in a first layer of the wall adjacent the inner surface and the rovings in a second layer of the wall adjacent the outer surface each extend spirally around the tube axis and wherein the rovings in an intermediate layer of the wall between the first and second layers extend substantially in the length of the tubular heat transfer element.

57. (New) An elongate tubular heat transfer element according to claim 56, wherein the rovings in the intermediate layer comprise about 60% of the total rovings and wherein the rovings of the first and second layers together comprise about 40% of the total rovings.

58. (New) An elongate tubular heat transfer element comprising a wall defining a hollow interior which extends longitudinally of a tube axis, said wall being of monolithic construction and having an inner surface and an outer surface and being formed from a composite material consisting essentially of a matrix of polyvinylidene fluoride having embedded therein rovings of boron-free chemically resistant glass fibres, the rovings comprising from about 20% to about 60% by volume based upon the volume of the composite material and including rovings which extend substantially in the length of the tubular heat transfer element and rovings which extend spirally around the tube axis.

59. (New) An elongate tubular heat transfer element according to claim 58, wherein the wall comprises a first layer adjacent the inner surface, a second layer adjacent the outer surface, and at least one other layer intermediate the first and second layers, wherein the rovings in each layer all extend substantially in a common direction which is different from the common direction of any adjacent contiguous layer, and wherein the common direction is in each case selected from a direction extending spirally around the tube

axis and a direction extending substantially in the length of the tubular heat transfer element.

60. (New) An elongate tubular heat transfer element according to claim 58, wherein the rovings in a first layer of the wall adjacent the inner surface and the rovings in a second layer of the wall adjacent the outer surface each extend spirally around the tube axis and wherein the rovings in an intermediate layer of the wall between the first and second layers extend substantially in the length of the tubular heat transfer element.

61. (New) An elongate tubular heat transfer element according to claim 60, wherein the rovings in the intermediate layer comprise about 60% of the total rovings and wherein the rovings of the first and second layers together comprise about 40% of the total rovings.

62. (New) A method of forming a tubular heat transfer element comprising:

providing a tape comprising boron-free chemically resistant glass fibre rovings embedded in a matrix of a fluoropolymer selected from polyvinylidene fluoride and copolymers of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride, the rovings extending in a direction substantially lengthwise of the tape and comprising from about 20% by volume to about 60% by volume of the tape;

laying down layers of the tape one on top of another on a mandrel having an axis, at least one of the layers having the tape applied in a direction substantially parallel to the axis of the mandrel and at least one other of the layers having the tape applied spirally of the axis of the mandrel; and

laminating the layers one to another by application of heat and pressure.

63. (New) A method of forming a tubular heat transfer element comprising:

providing a tape comprising boron-free chemically resistant glass fibre rovings embedded in a matrix of polyvinylidene fluoride, the rovings extending in a direction substantially lengthwise of the tape and comprising >from about 20% by volume to about 60% by volume of the tape;

laying down layers of the tape one on top of another on a mandrel having an axis, at least one of the layers having the tape applied in a direction substantially parallel to the axis of the mandrel and at least one other of the layers having the tape applied spirally of the axis of the mandrel; and

laminating the layers one to another by application of heat and pressure.